

## Description

# Finger Tip Stylus For Handheld Computing Devices

### BACKGROUND OF INVENTION

[0001] The small screen size of most handheld computing devices, PDA's for example, requires accurate input positioning information. Touching the display screen with just the finger tip for example, may not provide adequate information for proper performance of these devices when running certain types of software applications. For this reason most handheld computing devices are equipped with a "pencil-like" stylus intended to be held between the thumb and index finger to be used as a writing implement and/or as a user-interface, item-selection tool. The stylus tip is pointed in order to make precise positioning information available to the digitizer that subsequently encodes the stylus input. The stylus tip is constructed of a durable material, typically a hard plastic, which minimizes damage to the display surface. It is typically constructed

as lightweight as possible.

[0002] While a typical "pencil-like" stylus solves the immediate problem of providing accurate input positioning information for a handheld computing device, it can be tiresome to use over a prolonged period of time, especially if the software application demands a continuous stream of fine motor inputs from the user, e.g., playing a video game such as "Solitaire" or typing large amounts of text on a soft keyboard for an extended length of time. Although hand writing is more natural, there is always the possibility of misplacing or loosing the stylus, even though a tube like pouch or cradle, which is part of the handheld device, is usually provided.

[0003] The typical "pencil-like" stylus also requires the user to alternately pick it up or put it down as needed in order to free the hand for other pending tasks, for example, answering a phone call, assuming the device is being held with the opposite hand.

[0004] The instant invention mitigates many of the issues associated with these types of pointing devices for handheld computing devices and improving upon their functionality.

## **SUMMARY OF INVENTION**

[0005] The invention consists of a typical "pencil-like" *stylus tip*

*supplemented with a contoured base support attached to a finger tip by some suitable temporary bonding adhesive in at least the four different ways described below. The instant invention is referred to here simply as a finger tip stylus. A finger tip stylus may be implemented as a disposable, single-use product or as a reusable product with a disposable, single-use, temporary adhesive bonding interface and may be applied to as many finger tips of the hand as is necessary to complete some desired task. For example, attaching a finger tip stylus to the index finger tip and another to the adjacent finger tip can provide for "two-finger" touch typing on a soft keyboard, while attaching a finger tip stylus to the index finger and pressing the thumb up against the index finger in typical handwriting fashion can serve well as a writing implement.*

[0006] (1) The finger tip stylus can be attached to the finger tip by forming a temporary adhesive bond between the finger tip and the inside of the contoured base support. See Figure 1, version 1.

[0007] (2) The finger tip stylus can be attached to the finger tip by forming a temporary adhesive bond between the finger tip and the outside of the contoured base support by means of a circular adhesive patch, somewhat like a circu-

lar band aid, which bonds the outside of the contoured base support as well as part of the finger tip. See Figure 1, version 2.

[0008] (3) The finger tip stylus can be attached to the finger tip by forming a temporary adhesive bond between part of the finger nail and the inside of an extension of the contoured base support. See Figure 1, version 3.

[0009] (4) The finger tip stylus can be attached to the finger tip by forming a temporary adhesive bond between all of the finger nail and the inside of an extension of the contoured base support. See Figure 1, version 4.

#### **BRIEF DESCRIPTION OF DRAWINGS**

[0010] *Figure 1* comprises a collection of four (4) drawings intended to depict some of the various ways (*versions 1–4*) by which the finger tip stylus might interface with the finger tip.

#### **DETAILED DESCRIPTION**

[0011] The instant invention consists of a typical "pencil-like" stylus tip supplemented with a contoured base support that attaches to a finger tip by some suitable temporary bonding adhesive either directly to the finger tip or indirectly to the finger nail or both. The stylus tip is con-

structed of a suitable durable material, typically a hard plastic, designed to minimize possible damage to the display surface. It is typically 10 millimeters in length and approximately 5 millimeters in diameter at its widest part and supplemented by a contoured base support most likely fabricated of identical material as the stylus tip itself and continuous with it, similar in size and shape to a hard contact lens of approximately 10 millimeters in diameter and a few millimeters thick. The contoured base support may be extended as necessary for attachment to part or all of a finger nail and the adhesive bonding surface may extend as well from underneath the finger nail to include part or all of the finger tip. The four basic methods of attachment are depicted in *Figure 1 versions 1-4*.